Remarks:

This amendment is submitted in an earnest effort to advance this case to issue without delay. The examiner has indicated that the case contains allowable subject matter.

Claims 1-7 have been allowed.

Rejected claims 8-9 have been canceled.

Claims 10-16 have been allowed.

Rejected claim 17, from which rejected claim 18 depends, has been amended to define the invention with greater particularity over the art, in particular US 7,016,653 of Tsunehara.

More particularly Tsunehara is cited as showing a method for the estimation of the channel delay profile energy disclosed in the claim 17 of our application. This claim has been amended to reflect the differences of the instant invention from the architecture of FIG. 2 of Tsunehara that reflect also on the method used for estimating the channel delay profile energy.

The first difference is that in Tsunehara the memory bank (1021-102N) is used for storing the received signal y(k), while in the method of this invention a unique memory buffer (50) is used to

store the complex conjugate of the regenerated code sequence. Therefore, the two architectures and thus the related methods are clearly different.

The second difference is seen in the delay profile generator that in Tsunehara is implemented in the form of a matched filter (1031-103N) while in the method of this invention it is implemented in the form of a serial correlator (54). As explained below, this aspect has an impact on the addressing methods that must be used for reading the received signal or the regenerated code sequence in Tsunehara and in the method of this invention.

It is well known that a matched filter is implemented in the form of an FIR (Finite Impulse Response) filter whose coefficients are equal to the complex conjugate of the sequence that must be detected. For detection of such a sequence it is then sufficient to sequentially read the received signal sequence y(k), y(k+1), y(k+2),.., y(k+M), stored in the memory buffer (1021-102N), and feed the corresponding matched filter (1031-103N).

The serial correlator (54) in the method of this invention is implemented in the form of a complex multiplier followed by an integration and dump unit. In order to determine one point of the channel delay profile, corresponding to a delay τ, the serial correlator is fed with NC consecutive chips of the regenerated code sequence that are sequentially read from the memory buffer (50). The parameter NC represents the integration window size. By denoting as c(k) the regenerated code sequence, it

is possible to indicate the sequence that feeds the serial correlator as c(k), c(k+1), .., c(k+NC-1).

In order to determine a second point of the channel delay profile, the reading position on the memory buffer (50) must be updated, as stated in step c) of the method of this invention. For example in order to determine a second point corresponding to a delay $\tau+nT$, where T is the chip period and *n* an integer number, the reading position is updated by adding an offset value n + 1 to its present value. After this position update the code sequence that feeds the serial correlator (54) is time shifted by *n*Tc chips and then becomes c(k+NC+n), c(k+NC+n+1),.., c(k+2NC+n-1).

The procedure above is repeated for each point of the channel delay profile as stated in the step e) of the method of this invention.

It therefore follows that the reading method of the memory buffer and thus the corresponding memory controller of the method of this invention operate in a completely different way than Tsunehara.

In order to clarify this aspect related to the updating of the reading position claim 17 has been amended to specify that such updating is performed every NC chips, where NC is the integration window size. Support for such amendment can be found in the description on page 14, lines 3-10 (published PCT Application). In addition, in order to better clarify the method of this invention we have further amended claim 17 by incorporating the

feature that the memory buffer (50) has a first output port for feeding the plurality of fingers (78) with a corresponding plurality of samples of said regenerated user code and a second output port for feeding a basic correlator (54). Support for this amendment can be found in the description on page 13, line 20 to page 14 line 7.

Thus claim 17 clearly defines an invention patentable over the cited art. Claim 18, which depends from amended claim 17, is also allowable. Hence all the claims in the case are allowed or allowable. Notice to that effect is earnestly solicited.

If only minor problems that could be corrected by means of a telephone conference stand in the way of allowance of this

case, the examiner is invited to call the undersigned to make the necessary corrections.

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